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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,590	11/10/2003	Safwat Tadros	141621-1	6234

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EXAMINER

BUMGARNER, MELBA N

ART UNIT PAPER NUMBER

3732

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/705,590

Applicant(s)

TADROS ET AL.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-23 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chishti et al. (6,183,248) in view of Conn et al. (2002/0082360). Chishti et al. disclose an appliance 100 comprising a polymeric shell 102 that has cavities designed to receive teeth, the shell comprises a thermoplastic polymeric mixture that comprises polycarbonate and polyester; however, Chishti et al. do not show a specific polyester. Conn et al. teach a shell (sheet) comprising polycarbonate and cycloaliphatic polyester. It would have been obvious to one having ordinary skill in the art at the time the invention was made to specify the type of polyester to cycloaliphatic polyester in order to provide a shell that is free of blister in view of Conn et al. It is believed that the claimed stain resistance of the shell is inherently present in the polymeric shell comprising the claimed polymeric mixture even though it is not explicitly recited in the prior art. Chishti et al. including an additional thermoplastic polymer of polyvinyl halide. Conn et al. show the final cycloaliphatic polyester as claimed [0011]. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific molecular weight of the polymeric mixture components as they are not disclosed as critical to the claimed invention. The polycarbonate is present in an amount of about 5 to about 45 weight percent and the cycloaliphatic polyester is present in the amount of about 55 to about 95 weight percent.

Chishti et al. show the polymeric mixture has an elastic modulus of greater than or equal to about 1,500 Newtons/sq mm (column 6 line 15). It would have been an obvious matter of choice as to the specific value or range of values of a property of the mixture in that it has not been defined and/or its criticality has not been described as it pertains to the claimed invention. Chishti et al. show the shell has a thickness of about 127 to about 1016 micrometers. The shell of Chishti et al. comprises two or more layers (column 6 line 48) and one layer comprises an elastomer. The appliance is part of a system of appliance (column 5 line 27).

3. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chishti et al. (5,975,893) in view of Chishti et al. ('248) and Conn et al. Chishti et al. disclose a method for maintaining or repositioning teeth comprising placing an appliance in a patient's mouth, the appliance comprises a polymeric shell having cavities designed to received teeth; however, Chishti et al. do not show the polymeric mixture. The polymeric mixture of Chishti et al. and Conn et al. show the polymeric mixture as claimed as described above. Additional appliances may be placed in a patient's mouth wherein a tooth position defined by a single cavity in each successive appliance differs from that defined in a prior appliance by an amount of no more than 2 millimeters (column 5 lines 8-22).

#### ***Response to Arguments***

4. Applicant's arguments filed October 11, 2005 have been fully considered but they are not persuasive. It is believed that the shell comprising polymeric mixture of the prior art is stain resistant. The examiner hereby burdens the applicant to show that this is not present in the prior art. The applicant presents argument pertaining to the natural coloration of the polymer, which is not claimed.

*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner  
Primary Examiner